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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/068,299	WOOD ET AL.	
	Examiner	Art Unit	
	Lora E. Barnhart	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6,14-26 and 29-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6,14-26 and 29-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendments

Applicant's amendments filed 4/24/07 to claims 6, 14, and 22-25 have been entered. Claims 1-5, 7-13, 27, and 28 have been cancelled. Claims 29-31 have been added. Claims 6, 14-26, and 29-31 remain pending in the current application, all of which are being considered on their merits. Prior art references not included with this Office action can be found in a prior action.

It is noted that the amendments to the claims have eliminated independent claim 5, replacing it with new independent claim 29. At the time of allowance, the claims will be renumbered such that the independent claim is claim 1. No action is required by applicant at this time.

Claim Rejections - 35 USC § 112

Any rejections under 35 U.S.C. § 112 not addressed below are withdrawn in light of the claim amendments.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 29 requires removing cell conglomerates from the cells in step (c); however, there is no antecedent basis for this limitation in the claims. The starting

material and the intermediate compositions in claim 29 do not necessarily include cell conglomerates. Clarification is required.

Claim 29 also requires that the cell suspension be "free of xenogenic serum and cell conglomerates," but it is not clear whether "xenogenic" applies only to "serum" or also to the cell conglomerates. Clarification is required.

Step (b) of claim 29 refers to "xenogenic serum," but no point of reference is provided for the relative term "xenogenic." Clarification is required. Regarding this rejection of record, applicant alleges that one of skill in the art would understand "free of xenogenic serum" to mean, "substantially free of foreign matter" (Reply, page 7, paragraph 2). These arguments have been fully considered, but they are not persuasive. This allegation is counter to the definition in the art and is not substantiated by evidence. The dictionary definition of "xenogenic" is "originating outside the organism," and "serum" is not synonymous with the far broader term "matter." Furthermore, the claim requires the composition to be "free" of xenogenic serum but applicant alleges that "free" in this case means "substantially free." There is no basis in the specification for the definition applicants set forth in the remarks, and applicant's argument regarding the definition of this term is merely the argument of counsel and is unsupported by evidence or declarations of those skilled in the art. Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See M.P.E.P. § 2129 and § 2144.03 for a discussion of admissions as prior art. Counsel's arguments cannot take the place of objective evidence. *In re Schulze*, 145 USPQ 716 (CCPA 1965); *In re Cole*, 140 USPQ 230

(CCPA 1964); and especially *In re Langer*, 183 USPQ 288 (CCPA 1974). See M.P.E.P. § 716.01(c) for examples of attorney statements that are not evidence and that must be supported by an appropriate affidavit or declaration.

Because claims 6 and 14-26 depend from indefinite claim 29 and do not clarify these points of confusion, they must also be rejected under 35 U.S.C. 112, second paragraph.

Claim 6 requires that the composition of claim 5 be prepared from "autologous cells," but no point of reference is provided for the relative term "autologous." Clarification is required. Applicant provides no particular arguments for this rejection.

Claim 14 recites the limitation "the physical or chemical dissociating means" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 29 does not recite a physical or chemical dissociating means. Clarification is required.

Claim 22 refers to "a tissue biopsy derived from skin," but it is not clear how closely related to skin said biopsy must be. The term "derived from" merely requires some degree of similarity or a relationship through some unknown process. Clarification is required. The examiner suggests "derived" be replaced with "isolated." Applicant has neither complied with the examiner's suggestion nor provided arguments against this particular rejection.

Step (a) of claim 30 requires subjecting a tissue sample to a dissociating means "**capable of** dissociating cellular stratum in the tissue sample," but the claim does not actually require a step in which said sample is dissociated. Clarification is required. The examiner suggests the claim be amended to require subjecting a tissue sample to a

dissociating means "that dissociates cellular stratum" such that a dissociation step is required.

Similarly, step (b) of claim 30 refers to a nutrient solution "capable of maintaining the viability of the cells," which does not require that viability actually be maintained. Clarification is required.

Step (b) of claim 30 refers to "xenogenic serum," but no point of reference is provided for the relative term "xenogenic." Clarification is required. Applicant's comments regarding the rejection of claim 29 (formerly claim 5) on these grounds also apply to this rejection for the same reasons.

Step (c) of claim 30 recites, "the cellular suspension produced according to step (b)," but it is not clear that step (b) yields a suspension of cells. Furthermore, it is not clear whether "cellular suspension" refers to "a suspension of whole cells in a liquid" or to "a suspension made from cells, but not necessarily comprising whole cells." Clarification is required.

Claim 31 is indefinite for the same reasons set forth above for claim 30 and requires similar clarification.

Claim Rejections - 35 USC § 102

The rejection of record under 35 U.S.C. § 102 over Gunawardana et al. is withdrawn after further consideration by the examiner.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6, 14-24, and 29 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Yannas et al. (1983, U.S. Patent 4,418,691). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline.

Yannas et al. teach a composition comprising cells dissociated from skin (column 4, lines 58-60), said cells suspended in physiological saline (column 5, lines 3-6), and said cells separated from each other (column 4, line 66, through column 5, line 1).

Claim 29 is a product-by-process claim; claims 6 and 14-24 depend from said claim. M.P.E.P. § 2113 reads, "Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps."

"Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

unpatentable even though the prior product was made by a different process." *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) (citations omitted).

The structure implied by the process steps should be considered when assessing the patentability of product-by-process claims over the prior art, especially where the product can only be defined by the process steps by which the product is made, or where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product. See, e.g., *In re Garnero*, 412 F.2d 276, 279, 162 USPQ 221, 223 (CCPA 1979)

The use of 35 U.S.C. §§ 102 and 103 rejections for product-by-process claims has been approved by the courts. "[T]he lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious

difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in the cited claims produce a composition that is materially and patentably distinct from the skin cell suspension of Yannas et al.

It is noted that applicant has employed "means" language in claim 14. Applicant is advised that the specification does not provide a corresponding structure; therefore, in accordance with M.P.E.P. § 2182, the "means plus function" limitations in these claims have been interpreted broadly, *i.e.* with no structural limits.

Regarding the art rejections in general, applicants allege that the "key features" of the invention are the steps used to prepare the composition (Reply, page 8, paragraph continued from page 7). Applicants allege that the preparation steps result in a composition with properties not taught by the prior art, including a lack of xenogenic serum and cell conglomerates; cell viability; and suitability for downstream applications (Reply, page 8, paragraph 2). Regarding the rejection over Yannas in particular, applicant alleges that Yannas's method does not anticipate the instant claims because it requires an expansion step (Reply, page 8, paragraph 4). These arguments have been fully considered, but they are not persuasive.

As discussed above and previously (and placed in **bold type** for applicant's convenience), once a prior art product appearing to be substantially identical to the product in a product-by-process claim is found, the burden shifts to the applicant to demonstrate a patentable difference. Applicant has provided no evidence that the **cell suspension** of Yannas is distinct from that in the claims. The suspension of Yannas does not contain serum at all; the cells are dissociated from each other; there are viable

cells in the composition; and the explicitly stated utility for Yannas's cell suspension is application to a donor. Applicant has provided absolutely no evidence that the suspension of Yannas (referenced at column 5, line 51) has properties that the instant composition lacks, or *vice versa*. Such evidence is necessary to overcome this rejection.

Regarding the expansion step of Yannas, the instant composition is made by a method "comprising" 3 steps. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, *e.g.*, *Invitrogen Corp. v. Biocrest Mfg.*, L.P., 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003). The transition "comprising" in a method claim indicates that the claim is open-ended and allows for additional step. See M.P.E.P. §2111.03. Indeed, applicant's own specification indicates that "comprising" is open (page 8, lines 1-4). Therefore, the fact that Yannas includes steps not explicitly recited in the instant product-by-process claim is immaterial.

Claims 6, 14-21, and 23-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki et al. (1990, EP 0 350 887; reference C2 on 6/1/04 IDS). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Suzuki et al. teach a composition comprising cells dissociated from heart tissue (Reference Example 1; page 4, lines 50-54), said composition lacking aggregates removed by a No. 100 (150μm) filter (page 4, line 55); and a physiological saline, specifically HEPES buffer (page 4, lines 52-56). The 150μm filter of Suzuki et al. is a size of "about 200μm," since the scope of "about" is not limited by the specification.

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in the cited claims produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Suzuki et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicant stipulates that Suzuki does not teach using xenogenic serum (Reply, page 8, paragraph 3). Applicant further alleges that Suzuki's method does not apply to keratinocytes (Reply, page 8, paragraph 5). These arguments have been fully considered, but they are not persuasive.

Applicant's statement that Suzuki does not teach the presence of a xenogenic serum supports the rejection, because the composition of Suzuki clearly lacks xenogenic serum. Even if the claims were amended to read on a composition made by

a process that first adds, then removes, such serum, this reference would still anticipate, because only the properties of the composition are under consideration here.

Applicant's comment regarding keratinocytes is confusing, since the only claim that requires that the cells be keratinocytes is claim 22, which is not included in this rejection. Claims 29-31 merely require treating "a tissue sample" to yield a "cell suspension" suitable for "tissue grafting." There is no requirement that the composition comprise keratinocytes or, indeed, any particular cell type.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Hirobe (1992, *Journal of Cellular Physiology* 152: 337-345; reference C3 on 6/1/04 IDS). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Hirobe teaches a composition comprising cells dissociated from mouse skin tissue (page 337, column 2, paragraph 3), said composition lacking aggregates removed by a 200μm filter ("single cell suspensions," *ibid.*); and a physiological saline, specifically melanoblast defined medium, which comprises salts (page 338, column 1, paragraph 2).

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in the cited claims produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Hirobe. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicants allege that the presence of bovine serum albumin (BSA) in the composition of Hirobe overcomes the rejection (Reply, page 9, paragraphs 1 and 2). These arguments have been fully considered, but they are not persuasive.

Serum is the liquid portion of blood; BSA is a single protein. Applicants seem to be alleging that the claim term "serum" should be interpreted "serum or any component thereof," which is improper. No such definition was provided in the specification. BSA is not serum *per se*, and serum is not BSA.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Noel-Hudson et al. (1993, *In Vitro Cell and Developmental Biology – Animal* 31: 508-515; reference C6 on 6/1/04 IDS). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some

tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Noel-Hudson et al. teach a composition comprising cells dissociated from human foreskin tissue (page 509, column 1, paragraph 7), said composition lacking all aggregates removed by a 200μm filter ("individual cells;" *ibid.*); and a physiological saline, specifically Hanks' solution with calcium salts (*ibid.*).

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in the cited claims produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Noel-Hudson et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicant stipulates that Noel-Hudson does not teach using xenogenic serum (Reply, page 8, paragraph 3). Furthermore, applicant alleges that the instant invention is an "apparatus" that is "a unique device for preparing cell suspensions in a limited environment ... it provides a time efficient method for supplying a cellular cover

to a tissue in a clinical setting" (Reply, page 9, last paragraph, and page 10, first paragraph). These arguments have been fully considered, but they are not persuasive.

The claims currently under consideration are drawn to a cell suspension, not to any method for making the same or to any apparatus used to prepare the same. Comments regarding the patentability of a method *per se* or apparatus are immaterial to the patentability of the product-by-process claims under examination.

Furthermore, the claims do not include any limitations as to "graft preparation time" or "preparation period of the cells" as argued by applicants. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant's statement that Noel-Hudson does not teach the presence of a xenogenic serum supports the rejection, because the composition of Noel-Hudson clearly lacks xenogenic serum. Even if the claims were amended to read on a composition made by a process that first adds, then removes, such serum, this reference would still anticipate, because only the properties of the composition are under consideration here.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Lucas et al. (1994, U.S. Patent 5,328,695). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells.

In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Lucas et al. teach a composition comprising cells dissociated from muscle and skin tissue (Example 5; column 11, lines 11-25), said composition lacking aggregates removed by a 20μm filter (column 11, lines 25-28); and a physiological saline, specifically Tyrode's TM buffer (column 11, lines 10 and 29-30). The 20μm filter of Lucas et al. is a size of "about 50μm" or "about 75μm," since the scope of "about" is not limited by the specification; furthermore, a smaller filter would remove the same aggregates as a larger one, so the composition if Lucas et al. is identical to that in claims 25 and 26.

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in the cited claims produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Lucas et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicant alleges that Lucas teaches "a system of stimulating cells, not

using cells as a direct therapy" (Reply, page 10, paragraph 3). These arguments have been fully considered, but they are not persuasive.

In response to applicant's argument that Lucas does not teach using their cell suspension in "direct therapy," a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the explicitly stated utility of the composition of Lucas is "functional muscle tissue restoration *in vivo*" (Abstract), so the composition is clearly suitable for application to a graft.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Lavker et al. (1996, U.S. Patent 5,556,783). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Lavker et al. teach a composition comprising cells dissociated from skin tissue (Example 5; column 8, lines 43-50), said composition lacking aggregates removed by a 200μm filter (column 8, lines 52-54); and a physiological saline, specifically phosphate

buffered saline (column 8, line 51). The 200μm filter of Lavker et al. is a size of "about 150μm," since the scope of "about" is not limited by the specification.

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in claims 5, 6, 14-21, and 25-28 produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Lavker et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicants allege that since Lavker's method requires a layer of feeder cells, it does not anticipate the instant composition (Reply, page 10, paragraph 4). These arguments have been fully considered, but they are not persuasive.

Regarding the feeder layer of Lavker, the instant composition is made by a method "comprising" 3 steps. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, *e.g.*, *Invitrogen Corp. v. Biocrest Mfg.*, L.P., 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003). See M.P.E.P. §2111.03. Indeed, applicant's own specification indicates that

"comprising" is open (page 8, lines 1-4). Therefore, the fact that Lavker includes elements not explicitly recited in the instant claims is immaterial.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Katz et al. (1998, U.S. Patent 5,786,207; on 9/28/05 IDS). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells.

Katz et al. teach a composition comprising cells dissociated from tissue (Abstract; column 14, lines 63-64).

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in claims 5, 6, 14-21, and 25-28 produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Katz et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicant alleges that Katz does not teach "a cell suspension therapy as

taught in the pending claims" (Reply, page 10, paragraph 5). These arguments have been fully considered, but they are not persuasive.

In response to applicant's argument that Katz does not teach using their cell suspension in therapy, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the explicitly stated utility of the composition of Katz is "autologous, cell-based therapies" (Abstract), so the composition is clearly suitable for application to a graft.

Furthermore, it is emphasized once again for the record that the instant claims are drawn to a composition, not to a method of therapy.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(b) as being anticipated by Osborne et al. (1999, *Biomaterials* 20: 283-290; reference C4 on 6/1/04 IDS). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Osborne et al. teach a composition comprising cells dissociated from human foreskin tissue (page 284, column 2, section 2.3), said composition lacking all

aggregates removed by a 200μm filter ("single cell suspension;" *ibid.*); and a physiological saline, specifically serum-free keratinocyte medium (which comprises salts) (*ibid.*).

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in claims 5, 6, 14-21, and 25-28 produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Osborne et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicant stipulates that Osborne does not teach using xenogenic serum (Reply, page 8, paragraph 3). Finally, applicant alleges that the method of Osborne includes passaging steps and contacting with dispase and trypsin not required in the instant claims (Reply, page 10, paragraph 6). These arguments have been fully considered, but they are not persuasive.

Applicant's statement that Noel-Hudson does not teach the presence of a xenogenic serum supports the rejection, because the composition of Noel-Hudson clearly lacks xenogenic serum. Even if the claims were amended to read on a

composition made by a process that first adds, then removes, such serum, this reference would still anticipate, because only the properties of the composition are under consideration here.

Regarding the passaging step and contact with enzymes of Osborne, the instant composition is made by a method "comprising" 3 steps. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, *e.g.*, *Invitrogen Corp. v. Biocrest Mfg.*, L.P., 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003). See M.P.E.P. §2111.03. Indeed, applicant's own specification indicates that "comprising" is open (page 8, lines 1-4). Therefore, the fact that Osborne includes steps and elements not explicitly recited in the instant claims is immaterial.

Claims 6, 14-26, and 29-31 are/remain rejected under 35 U.S.C. 102(e) as being anticipated by Dennis et al. (2001, U.S. Patent 6,207,451). The claims are interpreted as being drawn to a composition comprising cells, said cells having been dissociated from some tissue, and a nutrient solution, said composition lacking large aggregates of cells. In some dependent claims, the tissue is skin. In some dependent claims, the nutrient media is a saline, possibly physiological saline. In some dependent claims, the composition lacks aggregates that would be removed by a filter of a particular size.

Dennis et al. teach a composition comprising cells dissociated from muscle tissue from which skin has been removed (column 12, lines 13-17), said composition

lacking aggregates removed by 15 minutes of centrifugation at 1200xg (column 12, lines 20-21); and physiological salines, specifically calcium-free phosphate-buffered saline (column 6, lines 15-16); D&C solution, which comprises salts (column 5, lines 19-22, and column 6, lines 17-25); and F12 nutrient medium, which comprises salts (column 5, lines 14-17, and column 6, lines 24-26). The centrifugation step of Dennis et al. removes cell aggregates, as would the instantly claimed filters. The muscle tissue of Dennis et al. is "derived from skin" in that the neonatal rats (column 6, lines 10-15) comprise muscle and skin, and the muscle tissue is removed from these neonatal rats, *i.e.* derived from skin.

Once a product appearing to be substantially identical is found and an art rejection made, the burden shifts to the applicant to show an unobvious difference. In this case, this rejection might be overcome by a substantive evidentiary showing that the method steps recited in claims 5, 6, 14-21, and 25-28 produce a composition that is materially and patentably distinct from the skin cell suspension and muscle cell suspension of Dennis et al. The discussion of product-by-process and means-plus-function limitations in the rejection over Yannas et al., above, also applies to this rejection.

Applicant's arguments regarding the art rejections in general (Reply, page 8, first 3 paragraphs) have been considered as they apply to this rejection and are not persuasive for the same reasons set forth above in the rejection over Yannas. Furthermore, applicants allege that Dennis does not teach using the cell suspension "as

a direct therapy" (Reply, page 10, last paragraph). These arguments have been fully considered, but they are not persuasive.

In response to applicant's argument that Dennis does not teach using their cell suspension in "direct therapy," a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In this case, the explicitly stated utility of the composition of Dennis is "biocompatible" (Abstract), so the composition is clearly suitable for application to a graft.

Claims 6, 14-26, and 29-31 also are/remain rejected under 35 U.S.C. 102(a) as being anticipated by Dennis et al. (2001, U.S. Patent 6,207,451) for the reasons stated above.

No claims are allowed. No claims are free of the art.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lora E. Barnhart whose telephone number is 571-272-1928. The examiner can normally be reached on Monday-Thursday, 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SANDRA E. SAUCIER
PRIMARY EXAMINER

Lora E Barnhart